Scientific Classification

Goal

- Group all living things by similarities they share, paying special attention to the phylogeny, so that sorting reflects our understanding of change.

Phylogeny

The development or change of a type or kind of organism

Scientific Name

- Each kind of living thing receives its own (unique) name.
- That unique name is known as a Scientific Name

Scientific Name

- Two words
- First part comes from the GENUS group
  - Always capitalized
- Second part comes from the SPECIES name

  -Always all lowercase

Why Do We Classify?

Learning and Understanding

- With several million different kinds of living things sorting them into groups is the only way to learn and understand them.

Solves common name problems

- Common name = everyday name

Useful Information

- When names were/are given useful information can be included in the name.
- Example:
  - Starfish and relatives are members of a phylum of invertebrates call ECHINODERMATA
  - Translation = Spiny (Echinos) Skin (Derma)

Latin Language

Why Latin?

- Because it is a dead language
  - Dead languages do NOT change
- Reason why learning scientific names seems like trying to learn a foreign language is because it is a foreign language

Why each country can not use its own language?

- Chat
- Katze
- Gato

How it works

Kingdom

First group

Based on major traits

Five choices p. 18 in your packet

- **Plantae**- multicellular & autotroph
- **Animalia** – multicellular & heterotroph
- **Fungi** – plantlike (lacks chlorophyll) and is a heterotroph

Multi-cellular

- **Monera** – single-celled and no nucleus
- **Protista** – single-celled & has a nucleus

Autotroph vs. Heterotroph

Autotroph-

– Makes its own food.

Not you making a sandwich!

Ex. A plant making its own food from sunlight.

Heterotroph-

Gets it energy from other organisms.

Ex. A lion killing and eating a zebra.

Phylum

- Next group
- Below Kingdom

Class

- Next group
- Below Phylum

Order

- Next group
- Below Class

Family

- Next group
- Below Order

Genus

- Grouping with more likenesses than differences

Species

- Grouping in which members are very much alike
- Able to produce young

Human Classification

Kingdom

- Animalia
  - –Multi-cellular
  - –Heterotrophic

Phylum

- Chordata
  - Hollow dorsal nerve cord
  - Paired Gill Slits
  - Notochord

Class

- Mammalia
  - Nurse young
  - Hair or fur

Order

- Primate
  - –Binocular vision
  - –Grasping hand (opposable thumb)

Family

- Hominidae
  - More erect posture
  - Large cranium
  - Relative lack of hair
  - Less protruding jaw

Genus

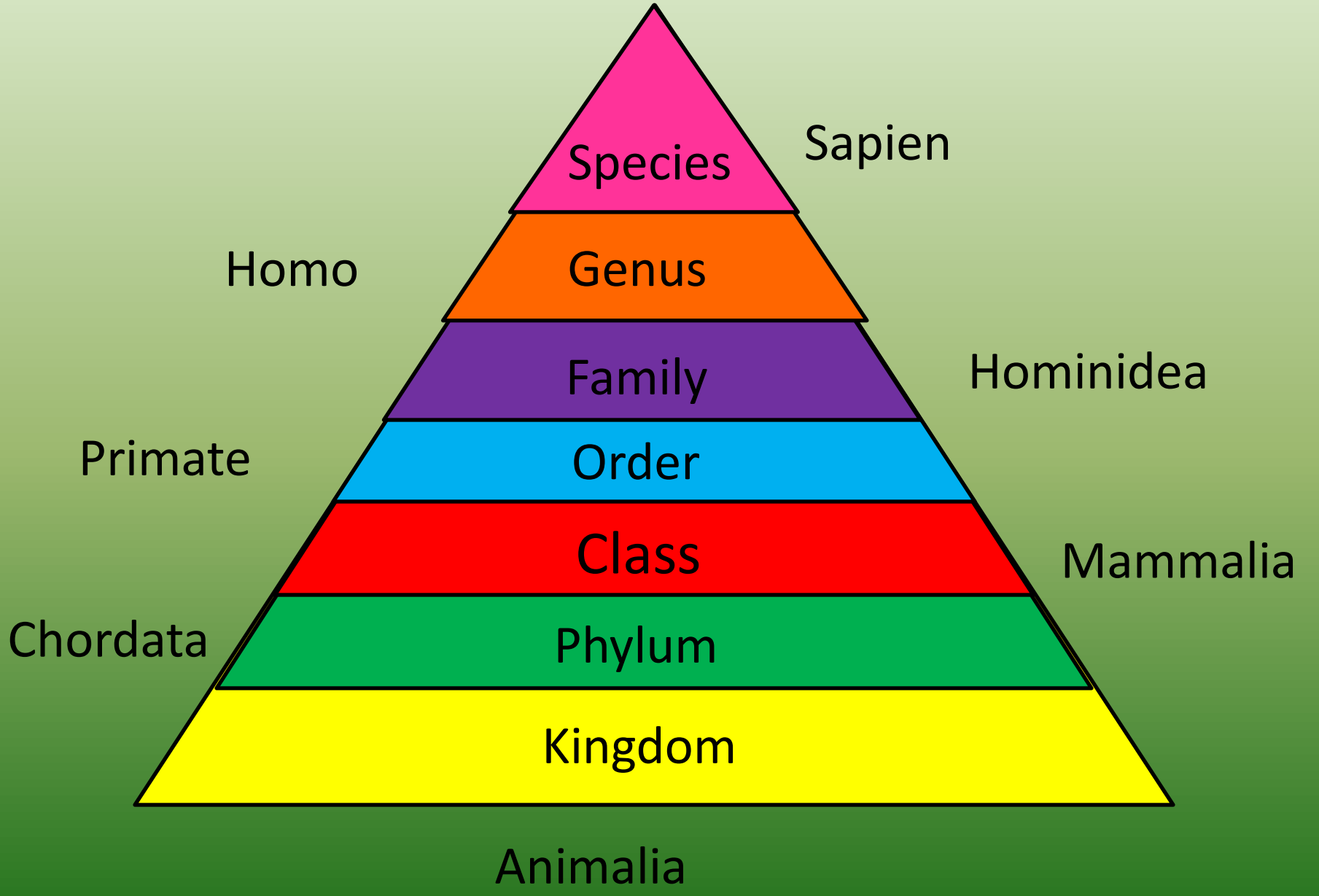
- Homo
  - Thinking

Species

Sapiens

Scientific Name

- *Homo sapiens*
  - Thinking man


Species
Sapien
Genus
Homo
Family
Hominidea
Order
Primate
Class
Mammalia
Phylum
Chordata
Kingdom
Animalia